Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

 (currently amended) A separator for a lithium polymer battery comprising:

a membrane having a first surface, a second surface, and a plurality of micropores extending from the first surface to the second surface;

a coating, the coating covering the membrane, but not filling the plurality of micropores, the coating comprising a gelforming polymer and a plasticizer in a weight ratio of 1:0.5 to 1:3, and having a surface density of 0.4 to 0.9 mg/cm².



- 2. (original) The separator of claim 1 wherein the coating covers the first surface and the second surface.
- 3. (original) The separator of claim 1 wherein the gelforming polymer is a copolymer of polyvinylidene fluoride.
- 4. (original) The separator of claim 3 wherein the comonomer content of the polyvinylidene fluoride copolymer comprises about 3-20% by weight.

- 5. (original) The separator of claim 4 wherein the comonomer content comprises about 7 to 15% by weight.
- 6. (original) The separator of claim 4 wherein the comonomer is selected from the group consisting of hexafluoropropylene, octofluoro-1-butene, octofluoroisobutene, tetrafluoroethylene, and mixtures thereof.
- 7. (original) The separator of claim 6 wherein the copolymer of polyvinylidene fluoride is polyvinylidene fluoride: hexafluoropropylene in which the hexafluoropropylene comprises about 9% by weight.
- 8. (original) The separator of claim 1 wherein the ratio is 1:2.
 - 9. (canceled)
- 10. (currently amended) The separator of claim $9\frac{1}{2}$ wherein the coating has a surface density of 0.55 to 0.7 mg/cm².
- 11. (original) The separator of claim 1 wherein the plasticizer is selected from the group of phthalate-based esters, cyclic carbonates, polymeric carbonates, and mixtures thereof.

- 12. (original) The separator of claim 11 wherein the phthalate based esters includes dibutyl phthalate.
- 13. (original) The separator of claim 11 wherein the cyclic carbonates are selected from the group consisting of ethylene carbonate, propylene carbonate, butylene carbonate, and mixtures thereof.
- 14. (original) The separator of claim 1 wherein the membrane is a single layer microporous membrane.
- 15. (original) The separator of claim 1 wherein the membrane is a multi-layered microporous membrane.
- 16. (original) The separator of claim 15 wherein the membrane is a tri-layer separator having a polypropylene/polyethylene/polypropylene structure.
- 17. (original) The separator of claim 1 wherein the membrane is a shutdown membrane.
- 18. (original) The separator of claim 1 wherein the membrane contains an ultra high molecular weight polyethylene.

19. (currently amended) A method of making a separator for a lithium polymer battery comprising the steps of:

providing a microporous membrane having a plurality of micropores;

providing a solution, the solution comprising a gelforming polymer, a plasticizer, and a solvent, the solution concentration being > 1% by weight;

coating the solution onto the membrane to have a surface density of 0.4 to 0.9 mg/cm^2 ;

driving off the solvent of the solution; and forming thereby a coating covering the membrane membrane, but not filling the plurality of micropores.

20. (original) The method of claim 19 wherein the solution concentration ranges from about 2 to 4% by weight.